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## IN THE CLAIMS

1.     (Currently Amended)   A method of constructing a multi-type feature vector comprising the steps of:

obtaining a ~~user's~~ communication interest <u>of a user</u> as represented by at least one of: a user request for a content update or a user subscription to a specific data item or to a set of proximal data sources;

obtaining network attributes;

obtaining application attributes; and

forming a <u>single</u> feature vector based on the ~~user's~~ communication interest, network attributes, and application attributes<u>,</u>

<u>wherein the single feature vector is used to cluster the user with one or more other users based on similarly-formed single feature vectors associated with the one or more other users</u>.

2.     (Currently Amended)   A method of clustering a multi-type vector space comprising the steps of:

obtaining network attributes from a network having a plurality of nodes;

obtaining application attributes of an application;

obtaining user's communication interest as represented by at least one of: a user request for a content update or a user subscription to a specific data item or to a set of proximal data sources;

<u>forming a plurality of feature vectors, one for each of the plurality of nodes, where each single one of the plurality of feature vectors is based on the user's communication interest, network attributes, and application attributes;</u> and

clustering the plurality of nodes based on the ~~network attributes, the application attributes, and the user's communication interest~~ <u>plurality of feature vectors</u>.

3.     (Previously Presented) The method of claim 2 such that clustering is performed by a fusion method in which one or more of said plurality of nodes are clustered in each

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attribute space on subspace classifiers.

4.      (Previously Presented)  The method of claim 2 such that clustering is performed by a nested method in which one or more of said plurality of nodes are initially clustered based on a sub-set of attributes and then re-clustered by iteratively considering additional attributes.

5.      (Previously Presented)  The method of claim 2, further comprising forming network delay maps and forward capacity maps from the network attributes, and such that clustering is based on the network delay maps and on the forward capacity maps.

6.      (Cancelled)

7.      (Original)  The method of claim 2, in which obtaining application attributes includes obtaining information regarding collaborative usage of the application.

8.      (Original)  The method of claim 2, in which obtaining network attributes includes obtaining network path loss information, and such that clustering is based on the path loss information.

9.      (Original)  The method of claim 2, such that clustering is based on bandwidth constraints.

10.  ·  (Original)  The method of claim 2, such that clustering is based on a weighted distance function modeled from normalized attribute subspace metrics.

11. – 20.      (Cancelled)

21.      (New)  The method of claim 1, further comprising:

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forming network delay maps and forward capacity maps from the network attributes.

22.    (New)    The method of claim 1, wherein the obtaining application attributes comprises obtaining information regarding collaborative usage of an application described by the application attributes.

23.    (New)    The method of claim 1, wherein the obtaining network attributes comprises obtaining network path loss information.

24.    (New)    The method of claim 1, wherein the network attributes comprise at least one of: available bandwidth, network delay, network packet loss, and node fanout.

25.    (New)    The method of claim 1, wherein the forming further comprises basing the single feature vector on one or more quality of service requirements.

26.    (New)    A computer readable storage medium containing an executable program for clustering a multi-type vector space, where the program performs the steps of:
obtaining network attributes from a network having a plurality of nodes;
    obtaining application attributes of an application;
    obtaining user's communication interest as represented by at least one of: a user request for a content update or a user subscription to a specific data item or to a set of proximal data sources;
    forming a plurality of feature vectors, one for each of the plurality of nodes, where each single one of the plurality of feature vectors is based on the user's communication interest, network attributes, and application attributes; and
    clustering the plurality of nodes based on the plurality of feature vectors.

27.    (New)    The computer readable storage medium of claim 26, wherein the clustering is performed by a fusion method in which one or more of said plurality of

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nodes are clustered in each attribute space on subspace classifiers.

28.    (New)    The computer readable storage medium of claim 26, wherein the clustering is performed by a nested method in which one or more of said plurality of nodes are initially clustered based on a sub-set of attributes and then re-clustered by iteratively considering additional attributes.

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